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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,980	12/19/2001	Dong-Woo Kim	678-766 (P9755)	4825
28249	7590	10/19/2005		
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			EXAMINER CHO, UN C	
			ART UNIT	PAPER NUMBER
			2687	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,980

Applicant(s)

KIM, DONG-WOO

Examiner

Un C. Cho

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (US 6,625,282 B2) in view of Magnasco et al. (US 6,016,347) and in view of Tuoriniemi et al. (US 5,978,689).

Regarding claim 1, Liang discloses a wireless headset (Fig. 1, 40) with a Bluetooth module (not shown), comprising a microphone supporting member having a microphone (Fig. 1, 42) installed therein and a controller (not shown) connected to the sensing device (Fig. 1, 43) and the Bluetooth module, the controller being operative to establish a link between the wireless headset and a master terminal (controller unit, Fig. 1, 20) registered in the wireless headset (Liang, Col. 3, lines 66 through Col 4, lines 1 – 12).

However, Liang as applied above does not specifically disclose a connector located between the microphone supporting member and a main body of the wireless headset and coupled thereto to allow for displacement of the main body and microphone supporting member relative to one another between a folding and unfolding position; a sensing device located in the connector for automatically determining whether the microphone supporting member and a

main body are displaced to one of the folding and unfolding positions; and a controller connected to the sensing device and the Bluetooth module, the controller being operative to establish a link between the wireless headset and a master terminal registered in the wireless headset if it is determined that the microphone supporting member and the main body are displaced to the unfolding position. In an analogous art, Magnasco discloses a connector located between the microphone supporting member and a main body of the wireless headset and coupled thereto to allow for displacement of the main body and microphone supporting member relative to one another between a folding and unfolding position (microphone boom (Fig. 3, 102) is coupled to a shaft member (Fig. 3, 202) to allow rotation of the microphone boom, which is connected to the headset housing (Fig. 1, 110), Magnasco, Col. 3, lines 16 – 24 and Col. 4, lines 20 – 29); a controller connected to the sensing device and the Bluetooth module, the controller being operative to establish a link between the wireless headset and a master terminal registered in the wireless headset if it is determined that the microphone supporting member and the main body are displaced to the unfolding position (PCB circuitry having a radio transmitter and a optical transceiver, controls the functions of the headset and the operational condition of the headset, whereas its functions are provided through the different positions of the microphone boom with respect to the housing such as “off or standby or mute or talk”, Magnasco, Col. 3, lines 25 – 35 and Col. 5, line 3 through Col. 6, line 35). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to provide the technique of Magnasco to the system of Liang in order to provide a cordless headset having a microphone boom wherein the headset is selectively configured to be on, off or muted according to a rotational position of the microphone boom and using an optical transceiver which is less susceptible to wear, contamination and misalignment and occupies less space than prior mechanical switch devices.

However, Liang in view of Magnasco as applied above does not specifically disclose a sensing device located in the connector for automatically determining whether the microphone supporting member and a main body are displaced to one of the folding and unfolding positions. In an analogous art, Tuoriniemi discloses a sensing device located in the connector (a user-manipulated switch (Fig. 1, 12) is connected to pivot, Fig. 1, 15 which connects the boom and the main body, Tuoriniemi, Col. 4, lines 9 – 58) for automatically determining whether the microphone supporting member and a main body are displaced to one of the folding and unfolding positions (according to the position of the switch determining whether the boom and the main body are in one of the folding and unfolding positions, Tuoriniemi, Col. 5, line 41 through Col. 6, line 36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Tuoriniemi to the modified system of Liang and Magnasco in order to provide a headset performing multiple functions by changing the position of the boom giving a user a hands-

free alternative to listen to an audio program and to initiate phone calls without taking the handset off.

Regarding claim 2, Liang in view of Magnasco and further in view of Tuoriniemi as applied to claim 1 above discloses wherein the connector attaching the microphone supporting member to the main body of the wireless headset includes a hinge structure housing the sensing device (optical transceiver (Fig. 3, 228) near the rotator element (Fig. 3, 210) is within the headset housing, Magnasco, Col. 5, lines 3 – 26).

Regarding claim 11, the claim is interpreted and rejected for the same reason as set forth in claim 1.

3. Claims 3 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang in view of Magnasco, in view of Tuoriniemi and in view of Specification of the Bluetooth System v1.0B, December 1<sup>st</sup> 1999 (hereto referred as Bluetooth Specification v1.0B).

Regarding claim 3, Liang in view of Magnasco discloses a wireless headset with a Bluetooth module comprising a microphone-supporting member having a microphone installed therein and coupled to a main body of the wireless headset (Liang, Col. 3, lines 66 through Col 4, lines 1 – 12). Tuoriniemi discloses a hinge structure located between and attached to the main body and microphone supporting member so that the main body and microphone supporting member are displaceable relative to one another between a folding

and unfolding position; a sensing device located in the hinge structure for determining the unfolding position and a controller connected to the sensing device (Magnasco, Col. 5, lines 3 – 26; Tuoriniemi, Col. 4, lines 9 – 58 and Col. 5, line 41 through Col. 6, line 36).

However, Liang in view of Magnasco and further in view of Tuoriniemi as applied above does not specifically disclose Bluetooth module registering an ID of the wireless headset in a counterpart terminal through the Bluetooth module if the unfolding position is determined. In an analogous art, Bluetooth Specification v1.0B discloses Bluetooth module for registering Bluetooth device address of the device in a counterpart device through the Bluetooth module (Bluetooth Specification v1.0B, User Interface aspects, Page 25). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Bluetooth Specification v1.0B to Liang, Magnasco and Tuoriniemi in order to provide an improved structure of earphone being small, light and easy for storage with excellent quality of communication, compatibility and flexibility to adapt to many devices having the same type of technology.

Regarding claim 4, Liang in view of Magnasco, in view of Tuoriniemi and in view of Bluetooth Spec v1.0B discloses wherein the microphone supporting member is attached to the main body of the wireless headset in the hinge structure (microphone boom is attached to the headset through a shaft member in order to permit movement of the microphone boom with respect to the headset housing, Magnasco, Col. 4, lines 20 – 29).

Regarding claim 5, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 6, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 7, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 8, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 9, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 10, the claim is interpreted and rejected for the same reason as set forth in claim 5.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1 – 11 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2687

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho  
Examiner  
Art Unit 2687

10/7/05   
UC.

  
10/7/05  
**LESTER G. KINCAID**  
SUPERVISORY PRIMARY EXAMINER